

NIH Chemical Waste Tag

Timothy (Ty) Adkins Waste and Resource Recovery Branch Division of Environmental Protection

October 20, 2021



EPA-Hazardous Waste Generator Improvement Rule



Key Provision

- Allowing the very small quantity generators (VSQGs) to transport hazardous waste to the large quantity generators (LQGs) under the control of the same person, etc.
- Allowing VSQGs to maintain its existing generator category in the event they generate an excessive amount of waste in a calendar month.

How does this affect operations at the NIH?

 EPA revised the regulations for labeling and marking of containers to clearly indicate the hazards of the hazardous waste.





Hazard Waste Determination

- Hazardous waste determination will now be made at the point of generation (in the labs).
- ➤ NIH Staff will be required:
 - ➤ to know the chemical hazards and apply hazard labels to their waste containers at the point of generation.
 - NIH staff can use knowledge or testing.
- > The words "hazardous waste" will have to be on the waste container (in the lab), if it applies.
 - MDE requires Interim waste containers apply







Hazard Waste Determination (Cont.)

The new regulations require NIH staff to determine to an inspector, State (MDE) or Federal (EPA), the hazardous waste determination to all waste.

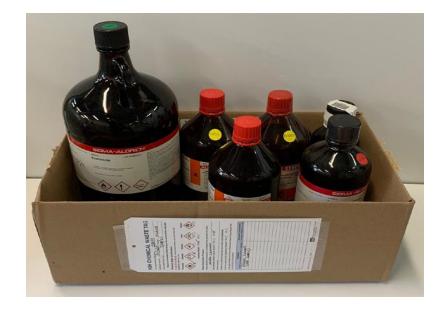
Typical Questions:

- 1. Why is this waste hazardous?
- 2. I see pictogram flammable and corrosive checked, why?
- 3. Why check flammable and corrosive for a dye?













Resources for Hazard Waste Determination

- Safety data sheet (SDS) of each hazardous chemical that is in the waste container.
- Hazard labels and warnings on the bottles used in generating the waste.
- Knowledge of protocols and/or processes.
- Testing that illustrates the properties of the waste. (i.e., pH paper)
- Advice received from DEP or CWS.
- Refer to Guidance Document: https://nems.nih.gov/Documents/Chemical_Waste_Tag_Guidance.pdf
- Future NEMS tools:
 - Segmented Training Videos
 - Hazardous Waste Search Table
 - Waste Tag Samples



Overclassifying



Formaldehyde (37%) containing Methanol (20%)











- PBS
- Sheath Fluid with Sodium Azide
- Bleach





Waste Tag: Checked Corrected Waste Tag:

















Hazardous Waste Determination for Blue and White Carboy



HAZARDOUS OR NONHAZARDOUS



















Chemical Tag Revisions

- Pictograms derived from the Global Harmonized System
 - GHS has 9 distinct Pictograms
 - OSHA has 8 distinct Pictograms
 - DOT has a variation of 15 pictograms
- The words "Hazardous Waste" was included on the tag with a "yes or no" check box
- Explanations and examples of Pictogram hazards
 With only five pictograms available, inclusions apply.

New Waste Tag Chemical Waste Contractor

- Waste Carboys (3-gal and 5-gal)
- Dry Chemical Waste Containers
- Pharmacy Waste collected in the provided Chemical Waste container.



NIH CHEMICAL WASTE TAG

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Accumulation Start [Date:		
*Dispose of all v	vastes within 60 days from	accumulation sta	rt date
Chemical Waste	Identification:		
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Revised 4/20 - FRONT



Use this tag to identify the contents of chemical and mixed waste containers:

- 1. Drums, solvent safety cans, carboys, boxes and other bulk containers;
- 2. Chemical mixtures and radioactive mixed wastes:
- 3. Items missing the original manufacturer's label; and
- 4. Items containing chemicals other than those stated on the original manufacturer's label. (In this case place a double "XX" through the original label).

Instructions:

- Completely and accurately fill out the information on the front of this tag and use wire tie or tape to attach tag to the container.
- Call 301-496-4710 for chemical waste removal service. If this waste also contains radioactive materials. call 301-496-4451.

Mark the box mixed waste:









Mark the box for each hazard that applies to the contents of the chemical or

- 1. Flammable for ignitable liquids, gases and solids:
- a. e.g., Methanol, Acetonitrile, Xylene, Butane, Magnesium (alloys)
- 2. Corrosive causes skin burns, eye damage, or destroys metal:
- a. e.g., Inorganic acids, Inorganic bases, Amines, Organic acids (Formic acid. Trichloroacetic acid. Trifluoroacetic acid. Acetic acid)
- 3. Reactive for the substance, solid or liquid, capable of a chemical
 - a. Water Reactive e.g., Sodium borohydride, Sodium, Dichlorosilane
- b. Spontaneously Combustible e.g., Carbon, Oily rags, Phosphorus
- c. Organic peroxides e.g., Methyl Ethyl Ketone peroxide
- d. Explosives e.g., Picric acid (solid), Nitroglycerin, most Di/Tri-nitro compounds, Lead azide, 1H-Tetrazole, Hydroxybenzotriazole
- 4. Toxic for the substances that are poisonous including:
- a. Poisonous by Inhalation e.g., Phosgene, Hydrogen cyanide
- b. Toxic e.g., Phenol, Acrylamide, Chloroform, Methylene chloride, Sodium cyanide, Potassium cyanide, Ethidium bromide
- 5. Oxidizers for the substance, solid or liquid, that yields oxygen and readily reacts to promote combustion:
- a. e.g., Hydrogen peroxide over 8%, Ammonium perchlorate, Chromic acid, nitric acid, perchloric acid, potassium chlorate

For assistance call Division of Environmental Protection, Waste and Resource Recovery Branch at 301-496-7990.

http://wasteguide.nih.gov

Discovery into Health Revised 4/20 - BACK

National Institutes of Health

New Waste Tag Self-Service Store

- NSN: 753000L075985 for ordering and pickup.
- Building 10 store
- Package shrink wrapped shall contain 10-12" coated twist ties, 10 Tags

Use for the following:

- Individual reagent(s) bottles
- Box or Tote of Compatible Chemicals.
- Drums or Large product containers.
- Interim waste container.
- Dry and Pharmacy Waste <u>not</u> collected in the provided Chemical Waste container.

NIH CHEMICAL WASTE TAG

Print Name/Service Request #:	
Building & Room#; Instit	ute:
Accumulation Start Date:	
*Dispose of all wastes within 60 days fro	om accumulation start date
Chemical Waste Identification:	
f a 🔞 🔗 🔗 😩 box is checked below	, you must check the
nazardous waste box, yes.	
Flammable Corrosive Reactive	Toxic Oxidizer
	V 0 V 0
Hazardous Waste? YES] NO []
Waste Generation Process:	
Briefly describe the procedure or process(es) the	nat generated this waste:
Are potentially infectious agents present? YE	s 🗌 NO 🗌
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Instructions:

- Completely and accurately fill out the information on the front of this tag and use wire tie or tape to attach tag to the container.
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Pictograms:

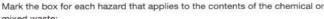












- 1. Flammable for ignitable liquids, gases and solids:
 - a. e.g., Methanol, Acetonitrile, Xylene, Butane, Magnesium (alloys)
- 2. Corrosive causes skin burns, eye damage, or destroys metal:
- a. e.g., Inorganic acids, Inorganic bases, Amines, Organic acids (Formic acid, Trichloroacetic acid, Trifluoroacetic acid, Acetic acid)
- Reactive for the substance, solid or liquid, capable of a chemical reaction:
- a. Water Reactive e.g., Sodium borohydride, Sodium, Dichlorosilane
- b. Spontaneously Combustible e.g., Carbon, Oily rags, Phosphorus
- c. Organic peroxides e.g., Methyl Ethyl Ketone peroxide
- d. Explosives e.g., Picric acid (solid), Nitroglycerin, most Di/Tri-nitro compounds, Lead azide, 1H-Tetrazole, Hydroxybenzotriazole
- 4. Toxic for the substances that are poisonous including:
- a. Poisonous by Inhalation e.g., Phosgene, Hydrogen cyanide
- b. Toxic e.g., Phenol, Acrylamide, Chloroform, Methylene chloride, Sodium cyanide, Potassium cyanide, Ethidium bromide
- 5. Oxidizers for the substance, solid or liquid, that yields oxygen and readily reacts to promote combustion:
- a. e.g., Hydrogen peroxide over 8%, Ammonium perchlorate, Chromic acid, nitric acid, perchloric acid, potassium chlorate

For assistance call Division of Environmental Protection, Waste and Resource Recovery Branch at 301-496-7990.



NIH form 2459, Revised 4/20 - FRONT

NIH form 2459, Revised 4/20 - BACK

National Institutes of Health



- ➤ A search table for what is and is not hazardous,
- ➤ An additional tool for performing the hazardous waste determination for the new waste tag,
- ➤ An accessible source for EPA waste codes for waste management, whether used by researching staff or chemical waste services.





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	om#:		ute:	
	Start Date: of all wastes wit		m accumulatio	n start date
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Search by HW Code, Chemical Name or Abstract No

Clear filter Chloroform Show 10 ∨ entries Showing 1 to 3 of 3 entries (filtered from 2,077 total entries) Chemical **Hazardous Abstracts** HW Hazards Waste No. No. **Substance** Type □ Flammable ☐ Corrosive D022 67-66-3 Chloroform D-Listed □ Reactive ☑ Toxic □ Oxidizer □ Flammable □ Corrosive Chloroform U044 67-66-3 **U-Listed** □ Reactive ☑ Toxic □ Oxidizer





Search by HW Code, Chemical Name or Abstract No

Cyanogen bromide

Clear filter

Hazardous ▲ Waste No.	Chemical Abstracts No.	♦ Substance	♦ HW ♦ Type Hazards
D003	506-68-3	Cyanogen bromide	☐ Flammable ☐ Corrosive D-Listed ☑ Reactive ☑ Toxic ☐ Oxidizer
J246	506-68-3	Cyanogen bromide (CN)Br	Hazardous waste due to the reactivity characteristic for the substance, solid capable of a chemical reaction.
		, , ,	☑ Toxic □ Oxidizer





Search by HW Code, Chemical Name or Abstract No

Silver Dichromate Clear filter

Show 10 ∨ entries Showing 1 to 2 of 2 entries (filtered from 2,077 total entries) Chemical **Hazardous Abstracts ♦** HW Waste No. No. **Substance** Type **Hazards** □ Flammable □ Corrosive Silver dichromate D007 7784-02-3 D-Listed □ Reactive ☑ Toxic: Chromium ☑ Oxidizer ☐ Flammable □ Corrosive Silver dichromate D011 7784-02-3 D-Listed □ Reactive ☑ Toxic: Silver ☑ Oxidizer





Chemical Waste Tags Examples









NIH CHEMICAL WASTE TAG

Print Name/Service Request #: TY ADKINS / SR#20852

*Dispose of all wastes within 60 days from accumulation start date

Building & Room#: 13/2W64 Institute: ORF/DEP

If a lack the box is checked below, you must check the

Accumulation Start Date: APRIL 5, 2021

Chemical Waste Identification:

NIH CHEMICAL WASTE TAG

Print Name/Service Request #: TY ADKINS / SR#20852 Building & Room#: 13/2W64 Institute: ORF/DEP

Accumulation Start Date: APRIL 5, 2021

*Dispose of all wastes within 60 days from accumulation start date

Chemical Waste Identification:

If a lack the box is checked below, you must check the

















Waste Generation Process:

Briefly describe the procedure or process(es) that generated this waste:

CHEMICAL LAB TRASH/DEBRIS

Are potentially infectious agents present? YES NO

Identify any disinfectant(s) added, down below under Chemicals

Does this waste contain radioactive materials? YES NO

If yes, also complete and attach a Radioactive Waste Pickup Receipt (NIH Form 88-35) to the container.

*DO NOT use chemical formulas, phychires, or obbreviations	or Volume Added (% or ml)
ACRYLAMIDE	1%
CHOROFORM	1%
DIAMINOBENZIDINE	1%
GELS AND PLASTIC	35%
PPE - GLOVES TYVEK	35%
PAPER AND RAGS	10%
GLASS	10%
METAL	5%
PHENOL	1%
ETHIDIUM BROMIDE	1%

NIH CHEMICAL WASTE TAG

Print Name/Service Request #: TY ADKINS / SR#20852
Building & Room#: 13/2W64
Institute: ORF/DEP

Accumulation Start Date: TODAY'S DATE

*Dispose of all wastes within 60 days from accumulation start date

Chemical Waste Identification:

If a lack the box is checked below, you must check the

Revised 4/20 - FRONT











Hazardous Waste? YES X NO □

Waste Generation Process:

Briefly describe the procedure or process(es) that generated this waste: **CELL MEDIA WITH WESCODYNE**

Are potentially infectious agents present? YES NO M

Identify agent(s) ___

Identify any disinfectant(s) added, down below under Chemicals

Does this waste contain radioactive materials? YES NO X

If yes, also complete and attach a Radioactive Waste Pickup Receipt (NIH Form 88-35) to the container.

*DO NOT use chemical formulas, structures, or abbreviations	or Volume Added (% or ml)
CELL MEDIA	10%
WESCODYNE	3%
WATER	87%
Transaction of the second	

National Institutes of Health

NIH CHEMICAL WASTE TAG

Print Name/Service Request #: TY ADKINS / SR#20852

Building & Room#: 13/2W64 Institute: ORF/DEP

Accumulation Start Date: APRIL 5, 2021

*Dispose of all wastes within 60 days from accumulation start date

Chemical Waste Identification:

If a 6 6 6 6 box is checked below, you must check the

Briefly describe the procedure or process(es) that generated this waste:

Are potentially infectious agents present? YES NO

Identify any disinfectant(s) added, down below under Chemicals

Does this waste contain radioactive materials? YES NO NO

If yes, also complete and attach a Radioactive Waste Pickup Receipt (NIH



Waste Generation Process:

Form 88-35) to the container.

FORMALIN

WATER

FORMALIN SOLUTION

Chemicals

ANIMAL TISSUE(S)









Estimated Concentration or Volume Added (% or ml

2%

10%

88%



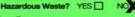








Waste Generation Process:





Briefly describe the procedure or process(es) that generated this waste:

GEL ELECTROPHORESIS GELS

Are potentially infectious agents present? YES NOW

Identify agent(s) ___

Identify any disinfectant(s) added, down below under Chemicals

Does this waste contain radioactive materials? YES NO If yes, also complete and attach a Radioactive Waste Pickup Receipt (NIH

Form 88-35) to the container

Chemicals	Estimated Concentration
*DO NOT use chemical formulas, structures, or abbreviations	or Volume Added (% or ml)
AGAROSE	50%
DIMETHYL SULFOXIDE	5%
ETHIDIUM BROMIDE	1%
POLYACRYLAMIDE	1%
BIS-ACRYLAMIDE	1%
STAINS AND DYES	0.1%
STYBR GREEN	0.1%
SODIUM AZIDE	0.1%
WATER	40%
	Annual Control of the

National Institutes of Health



Chemical Waste Tags Examples



NIH CHEMICAL WASTE TAG

Print Name/Service Request #: TY ADKINS / SR#20852

*Dispose of all wastes within 60 days from accumulation start date

Building & Room#: 13/2W64 Institute: ORF/DEP

If a (a) (a) (b) box is checked below, you must check the

NIH CHEMICAL WASTE TAG

Print Name/Service Request #: TY ADKINS / SR#20852

Building & Room#; 13/2W64 Institute: ORF/DEP

Accumulation Start Date: TODAY'S DATE

*Dispose of all wastes within 60 days from accumulation start date

Chemical Waste Identification:

If a (a) (a) (b) box is checked below, you must check the hazardous waste box, ves.







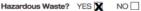








Oxidizer



Waste Generation Process:

NIH form 2459, Revised 4/20 - FRONT

Briefly describe the procedure or process(es) that generated this waste:

UNUSED NITRIC ACID 71%

Are potentially infectious agents present? YES NO X Identify agent(s)

Identify any disinfectant(s) added, down below under Chemicals

Does this waste contain radioactive materials? YES NO

If yes, also complete and attach a Radioactive Waste Pickup Receipt (NIH Form 88-35) to the container

Chemicals *DO NOT use chemical formulas, structures, or abbreviations	Estimated Concentration or Volume Added (% or ml)		
NITRIC ACID	71%		
WATER	29%		



NIH CHEMICAL WASTE TAG

Print Name/Service Request #: TY ADKINS / SR#20852

Building & Room#: 13/2W64 Institute: ORF/DEP Accumulation Start Date: TODAY'S DATE

*Dispose of all wastes within 60 days from accumulation start date

Chemical Waste Identification:

If a 6 4 4 box is checked below, you must check the hazardous waste box, ves.











Waste Generation Process:

Briefly describe the procedure or process(es) that generated this waste:

OSMIUM TETROXIDE WASTE

Are potentially infectious agents present? YES NO Identify agent(s)

Identify any disinfectant(s) added, down below under Chemicals

Does this waste contain radioactive materials? YES ... NO X

If yes, also complete and attach a Radioactive Waste Pickup Receipt (NIH Form 88-35) to the container.

Chemicals *DO NOT use chemical formulas, structures, or abbreviations or Volume Added (% or ml)

OSMIUM TETROXIDE	4%
WATER	96%

National Institutes of Health

Estimated Concentration

NIH CHEMICAL WASTE TAG

Print Name/Service Request #: TY ADKINS / SR#20852

Building & Room#: 13/2W64 Institute: ORF/DEP

Accumulation Start Date: TODAY'S DATE

*Dispose of all wastes within 60 days from accumulation start date

Chemical Waste Identification:

Waste Generation Process:

UNUSED TEMED

Form 88-35) to the container.

If a (a) (a) (b) (b) box is checked below, you must check the hazardous waste box, yes.

Briefly describe the procedure or process(es) that generated this waste:

Are potentially infectious agents present? YES NO

Identify any disinfectant(s) added, down below under Chemicals

Does this waste contain radioactive materials? YES NO X

If yes, also complete and attach a Radioactive Waste Pickup Receipt (NIH

Flammable



Identify agent(s)



Chemicals

*DO NOT use chemical formulas, structures, or abbreviations TETRAMETHYLETHYLENEDIAMINE





Estimated Concentration

or Volume Added (% or ml)

100%





Accumulation Start Date: TODAY'S DATE







Waste Generation Process:

Chemical Waste Identification:

hazardous waste box, ves.

Flammable

Briefly describe the procedure or process(es) that generated this waste:

Hazardous Waste? YES

FLAMMABLE MATERIAL

Are potentially infectious agents present? YES NO X Identify agent(s)

Identify any disinfectant(s) added, down below under Chemicals

Does this waste contain radioactive materials? YES NO

If yes, also complete and attach a Radioactive Waste Pickup Receipt (NIH

Form 88-35) to the container.

Chemicals *D0 NOT use chemical formulas, structures, or abbreviations	Estimated Concentration or Volume Added (% or ml
ETHANOL	100%
METHANOL	100%
HEXANE	100%
PENTANE	100%
TETRAHYDROFUAN	100%
ISOPROPANOL	100%
ACETONE	100%
n-BUTYLAMINE	100%

National Institutes of Health



Remember Those Questions

- 1. Why is this waste hazardous?
- 2. I see pictogram flammable and corrosive checked, why?
- 3. Why check flammable and corrosive for a dye?





rint Name/Se	HEMI	TY ADE	CINS / SR	#20852
uilding & Roo	13/2W	64 Instit	ute: ORF/D	EP
ccumulation	Start Date:	ODAY'S	DATE	
	of all wastes wi			on start date
a 🌘 🔷 🏖 azardous was		s checked below		
Tammable	Corrosive	Reactive	Toxic	Oxidizer

Briefly describe the procedure or process(e	es) that ge	nerated this was	ste:
FIXING AND STAINING	PROT	EINS	
Are potentially infectious agents present?	YES 🗌	NO X	
Identify agent(s)			
Identify any disinfectant/s) added down h	alow undo	Chamicale	

also complete and attach a Radioactive Waste Pickup Receipt (NIH

Form 88-35) to the container

Chemicals *DO NOT use chemical formulas, structures, or abbreviations	Estimated Concentration or Volume Added (% or ml)
METHANOL	25%
ACETIC ACID	10%
COOMASSIE BLUE	1%
WATER	64%

NIH	National Inst	itutes of Health
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NIH Drain Discharge Guidance

Timothy (Ty) Adkins
Waste and Resource Recovery Branch
Division of Environmental Protection

October 20, 2021





NIH Waste Policy

- Policy prohibits discharging of chemicals unless approved by Office of Research Facilities, Division of Environmental Protection ORF/DEP
- List of reagents or solutions approved for discharge
- DEP developed an <u>approval process</u> for staff to submit requests to discharge certain waste materials via the sanitary sewer

https://spapps.od.nih.gov/sites/DEPAuthorizations/SitePages/Home.aspx

Verify your waste before discharging to drain



What to Know to Ensure Compliance

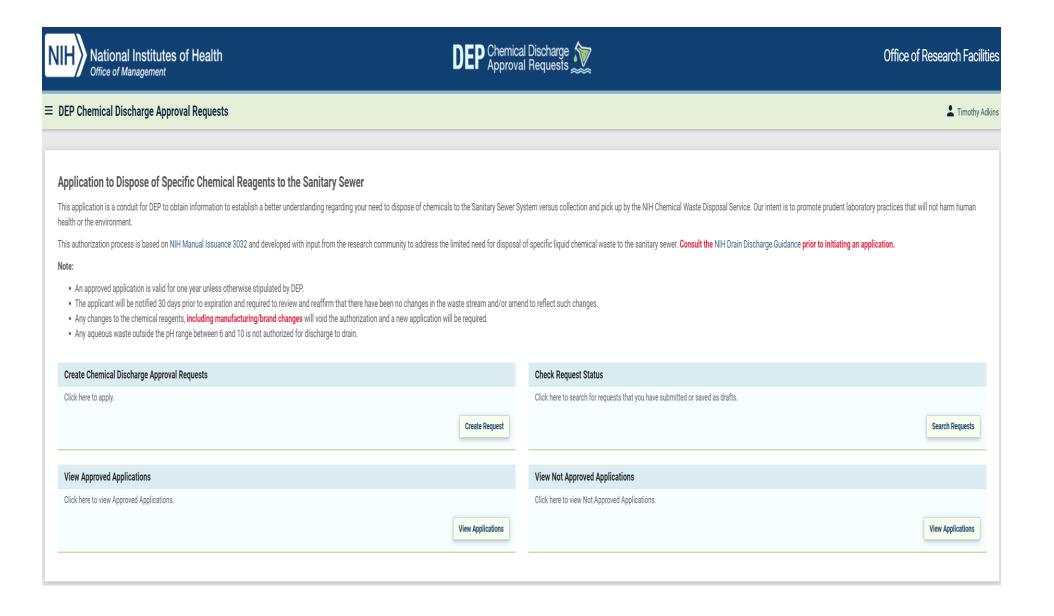


- ➤ If unsure of concentration, pH, or contents in the total waste, have the waste collected and disposed by the Chemical Waste Service.
- ➤ Any aqueous waste outside the pH range between 6 and 10 is not authorized for discharge to drain.
- ➤ Bleach combined with any antibiotics requires collection and disposal by the Chemical Waste Service.
- ➤ All Approved Chemicals are used in a process before discharge.



The New Drain Discharge Application Site







The New Drain Discharge Application Site (cont.)



reate New Application			
Notice Applicant Information			
Applicant Name (if you are submitting this request for someone else)			
0012103289 / Timothy Adkins (OD)	•		
1 To update, click the Clear button and search by name, NIHID or email.			
Alternate Contact (you can add more alternate contacts later)			
Hint: search by name, NIH ID or email	•		
Principal Investigator or Laboratory Manager *	♂ Clear		
Hint: search by name, NIH ID or email	•		
DOHS Safety and Health Specialist or IC Safety Contact * (Safety and Health Specialists Info)	⊘ Clear		
Hint: search by name, NIH ID or email	•		
	 		
Car	ncel Previous Sa		



The New Drain Discharge Application Site (cont.)



Request Details									
Application #: Application Date: Request Status: Expiry Date:		21-0000370-00 07/12/2021 Cancelled							
Applicant Information	Process	Location	Chemical Constituents	Attachments	Feedback	Approval	Notes	Audit Log	Emails
Process: Process Details: Volume Discharged pe Approximate pH: Effluent Phases: Justification:	er Week:								
Equipment \$				Manufacturer ♦					
Showing total 0 entries									





"Application Process to Dispose of Specific Chemical Reagents to the Sanitary Sewer"

Applicant: Submits online application and receives email acknowledgement DEP is notified by auto-email and a Staff Reviewer is assigned DEP Reviewers: dialogue with applicant and communicates status of the application DEP Director: Approval/disapproval and applicant notification

Applicant Dashboard Features:

- 1. Complete and apply for discharge authorization
- 2. Check the status of their applications
- 3. View all previously approved/disappr oved applications



The New Drain Discharge Application Site (cont.)



- Differences to the New Application Site:
 - Improves the structure and features of applications
 - Centralizes the records and evaluations
 - Generating reports, specific or general
 - Vital flexibility on managing applications
 - Includes renewals and possible overrides to an application
 - Updating an applicant information





Development of Approved List

- DEP worked with NIEHS approved combination of 250+ chemicals, products, and prep solutions.
 - Chemicals e.g.; Sodium Chloride, Magnesium Sulfate, Potassium Acetate
 - Products e.g.; Bleach, Blood Bank Saline, BD FACFlow Sheath Fluid
 - Prep solutions e.g.; Brain slicing perfusion, Embryo Water, Dialysis Buffer
- Some approved require an allowable concentration limit or require autoclave treatment (e.g. Antibiotics).
- Any pharmaceutical waste must be handled as chemical waste.
 - Any controlled substances including precursor chemicals are subject to a DEA registration.



APPENDIX B – EXPANDED LIST OF CHEMICAL SOLUTIONS APPROVED FOR DRAIN DISPOSAL



(*) = allowable concentration limit (•) = antibiotic

В

B-D (+) Glucose, and all Isomers - Beta D Glucose

Bacto Tryptic Soy Broth

Basal Medium Eagle

BD™ FACSFlow™ Sheath Fluid

Beta-Glucuronidase, Type VIII

Bicine [N, N-bis (2-hydroxyethyl) glycine]

Bile Salts

*Bleach (≤10% Clorox Bleach)

Blood Bank Saline

Bovine Serum Albumin (BSA)

Brain Slicing Perfusion Solution

Immunoglobulins, IgG

Immunoglobulins, IgM

Immunoglobulins, IgE

Insect Medium Supplement

Instant Ocean® Sea Salt

Insulin

Invertase, Grade V

IPL-41 Insect Medium

Iscove's Modified Dulbecco's Medium IMDM)

IsoFlow™ Sheath Fluid (Beckman Coulter)

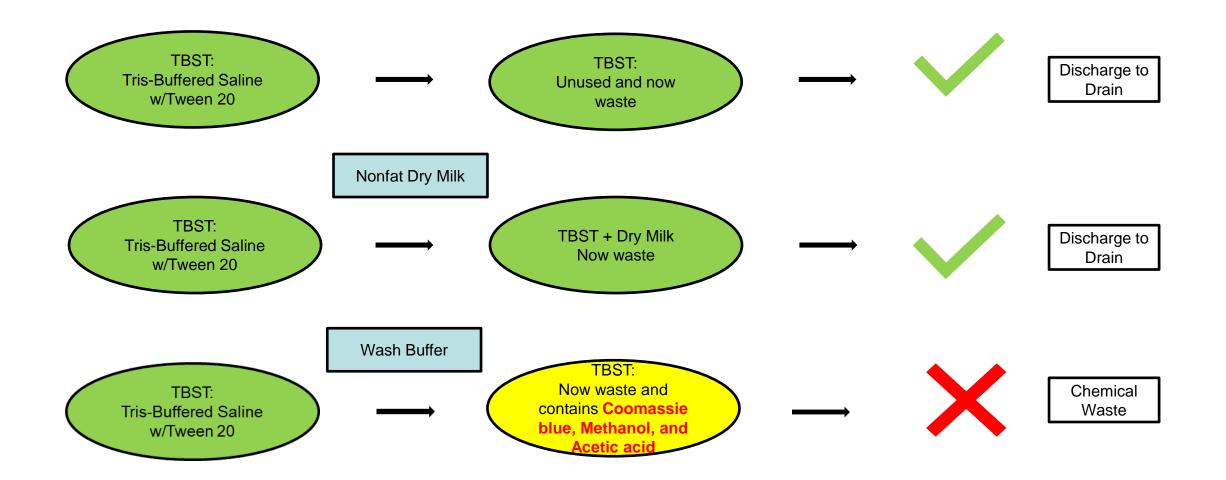
*Isopropanol (2-propanol) (<2% with Flash Point >140°F)

All approved chemicals are in a process before discharge



WHAT DOES ALL APPROVED MEAN?





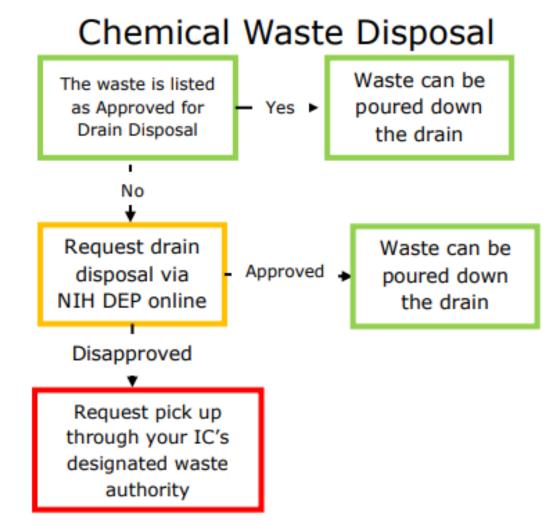




<u>Chemical</u> <u>Determination for</u> <u>Hazardous Waste</u>

If the chemical in question is not approved, the NIH will need to determine if it is acceptable for drain disposal

Generally, if the chemical waste is Ignitable, an Oxidizer,
Corrosive, Reactive or Toxic, it is a hazardous waste that needs to be collected for disposal.
Additionally, chemicals on EPA waste lists F, K, P, and U are identified as hazardous waste and subject to disposal regulations.





Waste Containing Antibiotics



- Autoclaving is the best practice and reliable means to inactivation.
- Antibiotics not listed below should be collected as chemical waste.

Inactivate by heat	Must be submitted for					
(autoclave or boil) before	combustion (treated as					
pouring down the drain	hazardous waste)					
Ampicillin	Blasticidin-S					
Amphotericin B	Choramphenicol					
(Fungizone)						
Carbenicillin	Ciprofloxacin					
Erythromycin	Enrofloxacin					
Geneticin (G418)	Kanamycin					
Gentamicin	Nalidixic acid					
Neomycin	Vancomycin					
Penicillin	Zeocin					
Puromycin	Zeomycin					
Streptomycin						
Sulfadoxine						
Tetracycline						



Chemicals Approved for Drain Disposal



When disposing of approved chemical via the drain use the following procedure:

- Ensure the sink to be used for drain disposal of chemicals is clear of all items.
- The worker shall wear appropriate PPE (lab coat, nitrile gloves, and protective eye wear).
- Turn on cold water and let run for about one (1) minute to ensure there is adequate flow of water down drain, no back up into the sink.
 Do not use the sink for disposal of chemicals if water does not freely flow down the drain.
- 4. Slowly pour material down the sink drain minimizing splashing.
- 5. Rinse out the material container if to dispose of, recycle, or reuse.
- Clean sink to ensure sink basin is free of material.
- Let tap water run for about two (2) minutes after pour to allow the material to flush through p-traps.
- Shut off water taps to sink.



Official Posters and Decal Stickers



Promote collection as the best practice handling all waste.

Selection 1 Selection 2 Selection 3 Selection 4

Do you KNOW What Can Go Down the Drain Wisely

Pour Down the Drain Wisely

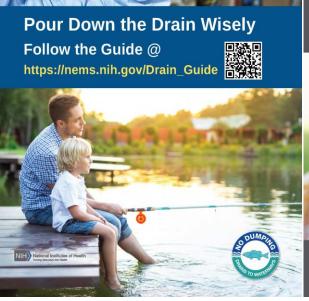
Pour Down the Drain Wisely

Pour Down the Drain Wisely

EOUMAINS.

https://nems.nih.gov/Drain_Guide

Follow the Guide @





https://nems.nih.gov/Drain_Guide



Acceptable liquids & Solvents @

https://nems.nih.gov/Drain_Guide





Official Posters and Decal Stickers



- Both available and promote the Drain Discharge Guidance
- 11 x 17 posters with adhesive backing
- Water-resistant decals for placement at the sink(s)
- Contact Craig Upson, Craig.Upson@nih.gov, with the following information:
 - Poster selection number(s) and/or Decal with quantity
 - Contact name(s)
 - Site location (e.g. NIH Main Campus, Baltimore)
 - Institute
 - Building
 - Room(s)







Resources

- The guidance document is now available https://nems.nih.gov/programs/WM/Pages/NIH-Drain-Disposal-Guide.aspx
- The NIH Chemical Waste Tag Guidance Tool
 https://nems.nih.gov/Documents/Chemical_Waste_Tag_Guidance.pdf
- Waste Guide and Services http://wasteguide.nih.gov/
- NIH Solvent Recovery Program
 https://nems.nih.gov/programs/WM/Documents/Solvent_Recovery.pdf
- NIH Chemical Surplus for Redistribution
 https://nems.nih.gov/programs/WM/Documents/Surplus_Chemical_Redistribution.pdf



Questions? Comments?



Contact Information

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We are happy to help you!



Questions? Comments?



Contact Information

Timothy (Ty) Adkins

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We are happy to help you!